

CEILING AND FLOOR MOUNTED SURGICAL ROBOT SET-UP

ABSTRACT OF THE DISCLOSURE

The present invention generally relates to surgical devices, systems, and methods, especially for minimally invasive surgery, and more particularly provides structures and techniques for aligning a robotic surgery system with a desired surgical site. The present invention describes techniques for mounting, configuring and arranging set-up arms for the surgical manipulators and endoscope drive mechanisms of a telesurgical system within an operating theater. The various aspects of the invention improve and optimize space utilization in the conduct of a surgical procedure, especially in the telesurgical systems which provide for concurrent operation by two surgeons using multiple robotic arm assemblies. In one aspect, the invention includes a method and apparatus for ceiling-height mounting of surgical set-up arms, and in another aspect, the invention includes a method and apparatus for the mounting of surgical setup arms to the table pedestal or floor below an operating table. The ceiling-height-mounted robotic arm assembly and below-table-mounted robotic arm assembly may be pre-configured to be ready for surgery while the fixable set-up arms are disposed generally clear of the personnel-usable space adjacent the operating table. Examples are described of separate and combined use of the ceiling mount and floor/pedestal mount aspects in both single and dual surgeon telesurgical systems.

PA 3191303 v1